

Day : Monday Date: 11/7/2005

Time: 12:56:09

Inventor Name Search

Enter the first few letters of the Inventor's Last Name.

Additionally, enter the first few letters of the Inventor's First name.

Last Name	First Name	
Robotti	Karla	Search

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Welcome to DialogClassic Web(tm)
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Logon file001 07nov05 16:06:05
          *** ANNOUNCEMENT ***
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                   * * *
     >>> Enter BEGIN HOMEBASE for Dialog Announcements <<<
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KWIC is set to 50.
HILIGHT set on as ' '
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     1:ERIC 1966-2005/Sep 30
File
       (c) format only 2005 Dialog
      Set Items Description
Cost is in DialUnits
B 155, 5, 73
       07nov05 16:06:16 User259876 Session D816.1
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                     0.241 DialUnits File1
     $0.84 Estimated cost File1
     $0.05 INTERNET
     $0.89 Estimated cost this search
     $0.89 Estimated total session cost 0.241 DialUnits
SYSTEM: OS - DIALOG OneSearch
  File 155:MEDLINE(R) 1951-2005/Nov 04
         (c) format only 2005 Dialog
         5:Biosis Previews(R) 1969-2005/Oct W5
  File
         (c) 2005 BIOSIS
  File 73:EMBASE 1974-2005/Nov 07
         (c) 2005 Elsevier Science B.V.
      Set Items Description
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S SOL-GEL OR (SOL (W) GEL)
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           11378
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          693561 GEL
            3729 SOL(W)GEL
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Processing
           32820 ENCAPSULATED
           15293 ENTRAPPED
           95676 IMMOBILIZED
         2051423 ENZYME
         2537317 DNA
         1536691 RNA
         1284158 ANTIBODY
         1230750 BIOLOGICAL
          545561 MATERIAL
            5601 BIOLOGICAL (W) MATERIAL
           39370 (ENCAPSULATED OR ENTRAPPED OR IMMOBILIZED) (S) (ENZYME OR
      S2
                  DNA OR RNA OR ANTIBODY OR (BIOLOGICAL (W) MATERIAL))
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            3729 S1
           39370 S2
             299 S1 AND S2
      S3
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            3365 MICROFLUIDIC
             240 MICRODEVICE
           46004 MICROARRAY
            1371 MICROCHANNEL
            1645 MICROCOLUMN
           53605 (MICROANALYTICAL OR MICROFLUIDIC OR MICRODEVICE OR
      S4
                  MICROARRAY OR MICROCHANNEL OR MICROCOLUMN)
?
S S3 AND S4
             299 S3
           53605 S4
              14 S3 AND S4
      S5
?
RD
...completed examining records
               8 RD (unique items)
?
T S6/3, K/ALL
  6/3, K/1
              (Item 1 from file: 155)
DIALOG(R) File 155:MEDLINE(R)
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17874565 PMID: 15253661

Entrapment of Src protein tyrosine kinase in sugar-modified silica.

Cruz-Aguado Jorge A; Chen Yang; Zhang Zheng; Brook Michael A; Brennan John D

Department of Chemistry, McMaster University, Hamilton, Ontario L8S 4M1, Canada.

Analytical chemistry (United States) Jul 15 2004, 76 (14) p4182-8,

ISSN 0003-2700 Journal Code: 0370536

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

... time a protein tyrosine kinase (PTK). Silane precursors bearing covalently attached gluconamide moieties were used in combination with the biocompatible precursor diglycerylsilane (DGS) to generate sol - gel derived silica that was able to encapsulate highly active Src PTK and preserve the activity of the enzyme over multiple uses. The relative activity of the enzyme was assayed using a LANCE based fluorescence energy transfer method involving time-gated detection of resonance fluorescence from a europium labeled antiphosphotyrosine antibody and Cy5 labeled streptavidin upon mutual binding to biotinylated phosphopeptides. Using this detection method, with the antibody and streptavidin external to the sol - gel matrix, it was possible to detect the phosphorylation of peptides with molecular weights of up to 2300 Da using the entrapped enzyme in N-(3-triethoxysilylpropyl)gluconamide (GLTES) doped glasses. Src kinase-doped glasses, derived from precursors such as tetramethyl orthosilicate, tetraethyl orthosilicate, or DGS that did not contain GLTES, provided no detectable enzyme activity. The addition of 1 mM ATP to the GLTES/DGS sol before the encapsulation of the protein increased the of the enzyme in the resulting gel, likely through a ligand-based stabilization mechanism. The use of such a system for determination of PTK activity and inhibition is demonstrated, setting the stage for the development of chromatographic and microarray based methods for the screening of kinase inhibitors.

6/3,K/2 (Item 2 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

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14757422 PMID: 12713046

Microchip-based purification of DNA from biological samples.

Breadmore Michael C; Wolfe Kelley A; Arcibal Imee G; Leung Wayne K; Dickson Dana; Giordano Braden C; Power Mary E; Ferrance Jerome P; Feldman Sanford H; Norris Pamela M; Landers James P

Department of Chemistry, University of Virginia, Charlottesville, Virginia 22904, USA.

Analytical chemistry (United States) Apr 15 2003, 75 (8) p1880-6, ISSN 0003-2700 Journal Code: 0370536

Contract/Grant No.: R21 CA78865-01; CA; NCI; R24 ES10229-01; ES; NIEHS

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

A microchip solid-phase extraction method for purification of DNA from

biological samples, such as blood, is demonstrated. Silica beads were packed into glass microchips and the beads immobilized with sol - gel to provide a stable and reproducible solid phase onto which DNA could be adsorbed. Optimization of the DNA loading conditions established a higher DNA recovery at pH 6.1 than 7.6. This lower pH also allowed for the flow rate to be increased, resulting in a decrease in extraction time from 25 min to less than 15 min. Using this procedure, template genomic DNA from human whole blood was purified on the microchip platform with the only sample preparation being mixing of the blood with load buffer prior to loading on the microchip device. Comparison between the microchip SPE (microchipSPE) procedure and a commercial microcentrifuge method showed comparable amounts of PCR-amplifiable DNA could be isolated from cultures of Salmonella typhimurium. The greatest potential of the microchipSPE device was illustrated by purifying DNA from spores from the vaccine strain of Bacillus anthracis, where eventual integration of SPE, PCR, and separation on a single microdevice could potentially enable complete detection of the infectious agent in less than 30 min.

6/3,K/3 (Item 3 from file: 155)

DIALOG(R) File 155:MEDLINE(R)

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14722144 PMID: 12669868

Simple method for preparation of nanostructure on microchannel surface and its usage for enzyme-immobilization.

Miyazaki Masaya; Kaneno Jun; Uehara Masato; Fujii Masayuki; Shimizu Hazime; Maeda Hideaki

Micro-space Chemistry Laboratory, National Institute of Advanced Industrial Science and Technology, 807-1 Shuku, Tosu, 841-0052 Saga, Japan. Chemical communications (Cambridge, England) (England) Mar 7 2003,

(5) p648-9, ISSN 1359-7345 Journal Code: 9610838

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Simple method for preparation of nanostructure on microchannel surface and its usage for enzyme-immobilization.

We developed a novel preparation method of nanostructure on the microchannel surface formed by sol - gel like simple treatment with 3-aminopropyltriethoxysilane, which is suitable for a highly efficient enzyme immobilized microchannel reactor.

6/3,K/4 (Item 4 from file: 155)

DIALOG(R) File 155: MEDLINE(R)

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13680689 PMID: 11320503

Stable sol - gel □microstructured and□ microfluidic□networks for□ protein patterning.

Kim Y D; Park C B; Clark D S

Department of Chemical Engineering, University of California, 110-C Gilman Hall, Berkeley, CA 94720, USA.

Biotechnology and bioengineering (United States) Jun 5 2001, 73 (5) p331-7, ISSN 0006-3592 Journal Code: 7502021

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Stable sol - gel □microstructured and□ microfluidic□networks for□ protein patterning.

We demonstrate the formation of micropatterned sol - gel structures containing active proteins by patterning with polydimethylsiloxane (PDMS) microchannels. To transport sol solution efficiently into the hydrophobic PDMS microchannels, a hydrophilic-hydrophobic block copolymer... ... were prepared containing the reactive organic moieties polyvinylalcohol or polyvinylpyrrolidone. Retention of biochemical activity within the micropatterned gel was demonstrated by performing immunobinding assays with immobilized immunoglobulin G (IgG) antibody . The potential application of microfluidics technology to immobilized - enzyme biocatalysis was PDMS-patterned demonstrated using microchannels filled with trypsin-containing sol-gels. This work provides a foundation for the microfabrication of functional protein chips using sol - gel processes. Copyright 2001 John Wiley & Sons, Inc.

6/3,K/5 (Item 1 from file: 5)

DIALOG(R) File 5:Biosis Previews(R)

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0014741021 BIOSIS NO.: 200400110727

Coupled enzyme reaction microarrays based on pin-printing of sol - gel derived biomaterials.

AUTHOR: Rupcich Nicholas; Brennan John D (Reprint)

AUTHOR ADDRESS: Department of Chemistry, McMaster University, Hamilton, ON, L8S 4M1, Canada**Canada

AUTHOR E-MAIL ADDRESS: brennanj@mcmaster.ca

JOURNAL: Analytica Chimica Acta 500 (1-2): p3-12 19 December, 2003 2003

MEDIUM: print

ISSN: 0003-2670 _(ISSN print)

DOCUMENT TYPE: Article RECORD TYPE: Abstract LANGUAGE: English

Coupled enzyme reaction microarrays based on pin-printing of sol - gel derived biomaterials.

ABSTRACT: We report on the development of a new class of protein microarrays based on the co-immobilization of multiple components within a single pin-printed sol - gel array element. In the first case, the microarraying of a coupled two enzyme reaction involving glucose oxidase and horseradish peroxidase along with the fluorogenic reagent Amplex Red is demonstrated to allow "reagentless" fluorimetric detection of glucose. The second system involved the detection of urea using co-immobilized urease and fluorescein dextran, which works on the basis of a pH induced change in fluorescein emission intensity upon production of ammonium carbonate owing to hydrolysis of urea. In both the cases, it is demonstrated that the changes in intensity from the array are time-dependent, consistent with the enzyme catalyzed reaction, showing that such arrays can be used for kinetic studies. The rate of intensity change was also found to be dependent on the...

...array, showing that such arrays could be useful for quantitative multianalyte biosensing. Inhibition of urease by the competitive inhibitor thiourea is also demonstrated on a microarray, demonstrating

that sol - gel -based microarrays may find use in high-throughput drug-screening applications. DESCRIPTORS: METHODS & EQUIPMENT: coupled enzyme reaction microarray --MISCELLANEOUS TERMS: sol - gel derived biomaterials 6/3,K/6 (Item 1 from file: 73) DIALOG(R) File 73: EMBASE (c) 2005 Elsevier Science B.V. All rts. reserv. EMBASE No: 2005305159 13245545 A sol - gel immobilization of nano and micron size sorbents in poly(dimethylsiloxane) (PDMS) microchannels for microscale solid phase extraction (SPE) Karwa M.; Hahn D.; Mitra S. S. Mitra, Department of Chemistry and Environmental Science, New Jersey Institute of Technology, 138 Warren Street, Newark, NJ 07032 United States AUTHOR EMAIL: mitra@adm.njit.edu Analytica Chimica Acta (ANAL. CHIM. ACTA) (Netherlands) 01 AUG 2005, 546/1 (22-29) ISSN: 0003-2670 CODEN: ACACA PUBLISHER ITEM IDENTIFIER: S0003267005008408 DOCUMENT TYPE: Journal ; Article LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH NUMBER OF REFERENCES: 44 A sol - gel immobilization of nano and micron size sorbents in poly(dimethylsiloxane) (PDMS) microchannels for microscale solid phase extraction (SPE)

Sorbent particles consisting of nano and micro silica, and micron size octadecylsilica (ODS) were immobilized using sol - gel chemistry onto poly(dimethylsiloxane) (PDMS) microfluidic channels to serve as mu-chip solid phase extraction (SPE) devices. Extraction, preconcentration and purification of biological and chemical analytes were carried out using these. Micro and nano scale silica- immobilized mu-SPE were used for the extraction/purification of DNA from recombinant Escherichia coli crude lysate. The average DNA recovery was 77 +/- 9% (X +/- R.S.D.) for the micron size silica particles and 70 +/- 5% (X +/- R.S.D.) for the nano silica particles. The extracted DNA could be amplified by polymerase chain reaction (PCR) whereas the DNA from the crude lysate solution could not be. This was a testimony to the purification capability of the mu-SPE device. ODS immobilized mu-SPE were used to study the extraction efficiency (EE) and enhancement factor (EF) for three groups of organic compounds, aromatics, phenols and carboxylic acids...

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6/3, K/7
              (Item 2 from file: 73)
DIALOG(R) File 73: EMBASE
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13083662
             EMBASE No: 2005143994
  Protein array consisting of sol - gel Dioactive platform for detection
 of E. coli 0157:H7
  Lee W.; Park K.-S.; Kim Y.-W.; Lee W.H.; Choi J.-W.
  J.-W. Choi, Dept. of Chem. and Biomol. Eng., Sogang University, 1
  Shinsu-Dong, Mapo-Gu, Seoul 121-742 South Korea
 AUTHOR EMAIL: jwchoi@ccs.sogang.ac.kr
  Biosensors and Bioelectronics ( BIOSENS. BIOELECTRON. ) (United Kingdom)
```

15 MAY 2005, 20/11 (2292-2299) CODEN: BBIOE ISSN: 0956-5663

DOCUMENT TYPE: Journal; Conference Paper LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

NUMBER OF REFERENCES: 26

Protein array consisting of sol - gel□bioactive platform for detection□
of E. coli O157:H7

Sol - gel -derived bioactive platform was fabricated for detection of pathogenic microbes, E. coli O157:H7. Design flexibility of sol - gel technique and ease of fabrication can fulfill to create the surfaces with structural and chemical features that are compatible with biomaterials such as antibody , enzymes, etc. In this study, the bioactive platform was prepared based on the silica gels, which were produced by hydrolyzing tetraethylorthosilane (TEOS) in ethanol. The...

...triethoxysilane (MPTS) was mixed with the TEOS solution for the surface functionalization of bioactive platform. During TEOS hydrolysis, the modified thin film was prepared by sol - gel dip coating. Antibody against E. coli 0157:H7 was immobilized with a configuration of protein array using piezo-type dispensing system. Surface morphology of the prepared bioactive platform was analyzed using atomic force microscopy (AFM). The antibody -antigen interaction was investigated with fluorescence microscopy and sandwich type immunoassay using fluorescein isothiocyanate (FITC)-labeled antibody. The results showed that antibody was sequestered within the sol - gel -derived bio-gel due to physical adsorption. The measurement of E. coli 0157:H7 was done using the fabricated antibody surface. The fluorescence intensity was proportional to the concentration of E. coli 0157:H7, of which the detection limit was 10 SUP2 CFU/ml. (c...

MEDICAL DESCRIPTORS:

*protein microarray ; *bacterium detection

6/3,K/8 (Item 3 from file: 73)

DIALOG(R) File 73:EMBASE

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12952447 EMBASE No: 2005011911

Titania and alumina sol - gel - derived microfluidics enzymatic-reactors for peptide mapping: Design, characterization, and performance

Wu H.; Tian Y.; Liu B.; Lu H.; Wang X.; Zhai J.; Jin H.; Yang P.; Xu Y.; Wang H.

P. Yang, Department of Chemistry, Fudan University, Shanghai 200433 China

Journal of Proteome Research (J. PROTEOME RES.) (United States) 2004, 3/6 (1201-1209)

CODEN: JPROB ISSN: 1535-3893
DOCUMENT TYPE: Journal; Article

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

NUMBER OF REFERENCES: 25

Titania and alumina sol - geld-derived microfluidics enzymatic-reactorsdefor peptide mapping: Design, characterization, and performance

...alumina-based Poly(dimethylsiloxane) (PDMS) microfluidics enzymatic-reactors along with their analytical features in coupling with MALDI-TOF and ESI-MS were reported. Microfluidics with microchannel and stainless steel tubing (SST) were fabricated using PDMS casting and

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OSUB2-plasma techniques, and were used for the preparation of an
enzymatic-reactor. Plasma oxidation for the PDMS microfluidic system
enabled the channel wall of the microfluidics to present a layer of silanol
(SiOH) groups. These SiOH groups act as anchors onto the microchannel
wall linked covalently with the hydroxyl groups of trypsin-encapsulated sol
matrix. As a result, the trypsin-encapsulated gel matrix was anchored onto
the wall of the microchannel , and the leakage of gel matrix from the
 microchannel was effectively prevented. A feature of the microfluidic
enzymatic-reactors is the feasibility of performing on-line protein
analysis by attached SST electrode and replaceable tip. The success of
trypsin encapsulation was investigated...
MEDICAL DESCRIPTORS:
*peptide mapping; *matrix assisted laser desorption ionization time of
flight mass spectrometry; *electrospray mass spectrometry; * immobilized
 enzyme reactor
                Description
        Items
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S2
        39370
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S3
          299
                S1 AND S2
S4
        53605
                (MICROANALYTICAL OR MICROFLUIDIC OR MICRODEVICE OR MICROAR-
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S5
                S3 AND S4
S6
                RD (unique items)
S S1 (S) S2
            3729 S1
           39370 S2
             285 S1 (S) S2
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?
        Items
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Set
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S1
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S2
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S3
          299
                S1 AND S2
S4
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S5
           14
                S3 AND S4
S6
                RD (unique items)
S7
                S1 (S) S2
          285
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S S7 AND S4
             285 S7
           53605 S4
              13 S7 AND S4
      S8
?
RD
...completed examining records
               7 RD (unique items)
      S9
?
S S9 NOT S6
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7 S9
              8 56
              0 S9 NOT S6
    S10
?
               Description
Set
        Items
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S1
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S2
        39370
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            DNA OR RNA OR ANTIBODY OR (BIOLOGICAL (W) MATERIAL))
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          299
               S1 AND S2
S4
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            RAY OR MICROCHANNEL OR MICROCOLUMN)
S5
               S3 AND S4
           14
               RD (unique items)
S6
s7
               S1 (S) S2
         285
               S7 AND S4
S8
          13
S9
               RD (unique items)
               S9 NOT S6
S10
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COST
       07nov05 16:11:41 User259876 Session D816.2
                    1.197 DialUnits File155
              $0.88 4 Type(s) in Format 3
           $0.88 4 Types
    $4.95 Estimated cost File155
                  0.759 DialUnits File5
              $0.16  1 Type(s) in Format 95 (KWIC)
           $0.16 1 Types
    $4.64 Estimated cost File5
           $6.52 0.613 DialUnits File73
              $8.82 3 Type(s) in Format 3
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    $15.34
           Estimated cost File73
           OneSearch, 3 files, 2.569 DialUnits FileOS
    $1.60 INTERNET
   $26.53 Estimated cost this search
    $27.42 Estimated total session cost 2.811 DialUnits
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Return to logon page!

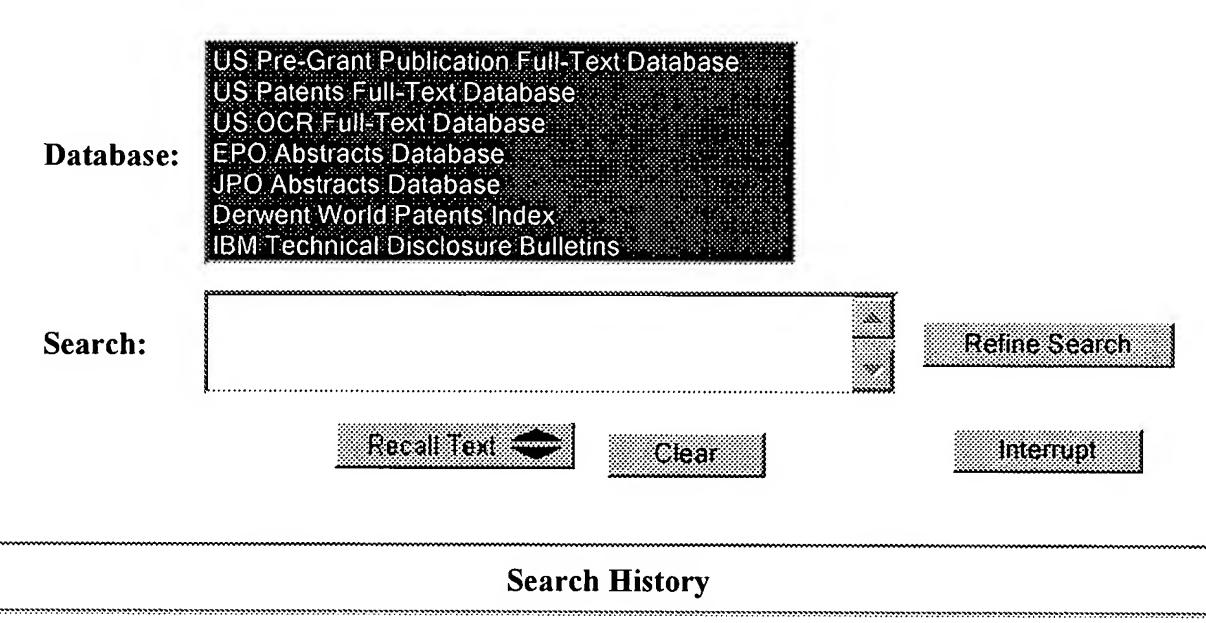
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Refine Search

Search Results -

Term	Documents
(11 AND 5).PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD.	44
(L11 AND L5).PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD.	44



DATE: Monday, November 07, 2005 Printable Copy Create Case

Name	Query	<u>Hit</u>	<u>Set</u>
side by		<u>Count</u>	<u>Name</u>
side			result set
DB=I	PGPB, USPT, USOC, EPAB, JPAB, DWPI, TDBD; THES=ASSIGNEE; PLUR=1	YES:	
OP=AN		,	
<u>L12</u>	L11 and L5	44	<u>L12</u>
<u>L11</u>	L2 same L3	450	<u>L11</u>
<u>L10</u>	L8 and L6	24	<u>L10</u>
<u>L9</u>	L8 and L6	24	<u>L9</u>
<u>L8</u>	(crushing or grinding) same (gel or particulate or particle)	84926	<u>L8</u>
<u>L7</u>	L6 and (UV or IR or Raman or (mass adj spectrometry))	162	<u>L7</u>
<u>L6</u>	L5 and L4	203	<u>L6</u>
<u>L5</u>	(microanalytical or microfluidic or microdevice or microarrray or microchannel or microcolumn)	22648	<u>L5</u>
<u>L4</u>	L3 and L2	1783	<u>L4</u>
	(encapsulated or entrapped or immobilized) same (enzyme or DNA or		

<u>Hit</u>

<u>Set</u>

<u>L3</u>	RNA or antibody or molecule or material)	145255	<u>L3</u>
<u>L2</u>	(sol-gel) or (sol adj gel)	26518	<u>L2</u>
<u>L1</u>	Robotti-Karla.in.	3	<u>L1</u>

END OF SEARCH HISTORY